

**REMARKS**

Upon entry of the amendments, claims 1-2 and 4-9 will be all the claims pending in the application.

Applicants have amended claim 1 by incorporating therein the subject matter of claim 3. Claim 3 has been canceled without prejudice or disclaimer.

**I. Paragraph Nos. 3-6: Rejections Under 35 U.S.C. §103**

Claims 1-6 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Inoue, *et al.* EP 0 901 991 A2 ("Inoue").

Claims 7-9 are rejected under 35 U.S.C. 103(a) as allegedly being obvious over Inoue in view of XP 002151982 and EP 08 20 967 A1.

**Applicants' Response**

Applicants respectfully traverse.

Inoue discloses at paragraph [0015] that two interlayers may optionally be used. The purpose of using the two interlayers is to decrease the reflectance of a photocatalyst layer as an outermost layer, as well as to decrease the reflection color.

Inoue's two interlayer technique per se is known.

The presently claimed article includes (i) a substrate, (ii) an n-type semiconductor film primer layer formed over a surface of the substrate, and (iii) a photocatalyst film made of an n-type semiconductor formed on the primer layer. ~~In the presently claimed article, the n-type semiconductor film primer layer is specifically defined as consisting essentially of at least one of niobium oxide, tin oxide, and zirconium oxide, each of which is specifically defined as having an energy band gap larger than that of the photocatalyst film (iii).~~ The presently claimed article efficiently separates electrons and holes, thereby resulting in increased photocatalytic activity for

the photocatalyst layer.

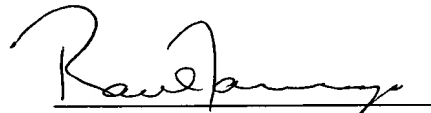
It is completely unexpected from the cited art, including Inoue, that an n-type semiconductor film primer layer consisting essentially of at least one of niobium oxide, tin oxide, and zirconium oxide would result in higher photocatalytic activity of the photocatalyst film and, hence, better antifouling properties.

At least for the foregoing reason, Applicants respectfully request that the Examiner reconsider and withdraw these §103 rejections.

## II. Conclusion

Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

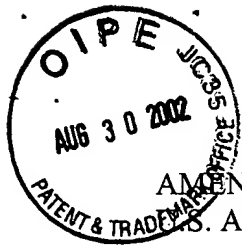
Respectfully submitted,



L. Raul Tamayo  
Registration No. 47,125

SUGHRUE MION, PLLC  
2100 Pennsylvania Avenue, N.W.  
Washington, D.C. 20037-3213  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

Date: August 30, 2002



AMENDMENT

U.S. Appln. No. 09/630,777

## APPENDIX

### VERSION WITH MARKINGS TO SHOW CHANGES MADE

#### IN THE CLAIMS:

Claim 3 is canceled.

Claim 1 is amended as follows:

1. (AMENDED) An article having photocatalytic activity which comprises a substrate, a first n-type semiconductor film as a primer layer formed over a surface of the substrate, and a photocatalyst film made of an n-type semiconductor and formed on the primer layer, said first n-type semiconductor film as the primer layer (i) having an energy band gap larger than that of said photocatalyst film and (ii) being an oxide semiconductor film consisting essentially of at least one metal oxide selected from the group consisting of niobium oxide, tin oxide, and zirconium oxide.

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